

WHAT IS CLAIMED IS:

1. A radio signal receiver in a radio communication system for executing communication by transmitting and receiving pulse signals, comprising:
 - a template generation portion for generating a template; and
 - a correlation device for calculating correlation between the template generated and a signal received from a transmitter;wherein said template generation portion generates the template on the basis of a reception waveform of a first signal as a known signal received from said transmitter; and
- said correlation device determines a correlation between a second signal received from said transmitter and the template and discriminates the second signal on the basis of the correlation result.
2. A radio signal receiver as defined in claim 1, wherein said template generation portion includes an amplitude peak detector for detecting a plurality of amplitude peaks from the reception waveform of said first signal, amplifies a predetermined reference template on the basis of the amplitude peaks so detected, synthesizes the plurality of reference templates so amplified and generates the template.
3. A radio signal receiver as defined in claim 2, wherein said amplitude peak detector detects and outputs a peak timing of the amplitude peak detected,

and the reference templates amplified are superposed and synthesized at timings deviated by the time corresponding to the corresponding peak timings detected.

4. A radio signal receiver as defined in claim 2, wherein said template generation portion uses the amplitude peak for generating the template when the amplitude peak detected has amplitude exceeding a predetermined threshold value.

5. A radio signal receiver as defined in claim 1, wherein said radio communication system discriminates whether the transmission signal is set to 0 or 1 from deviation of a transmission timing of a pulse signal from a reference time, and said template generation portion acquires a reception waveform of the first signal, and generates the template by synthesizing a waveform obtained by inverting a sign of the reception waveform and delaying the reception waveform by a time corresponding to deviation of the transmission timing and the reception waveform.

6. A radio signal receiver as defined in claim 1, wherein communication with said transmitter is made through a packet, the first signal is contained in a header portion of said packet and the second signal is contained in an information portion of said packet.

7. A radio signal receiver as defined in claim 1, wherein said template generation portion stores the waveform of the first signal as a first reference

waveform, generates a second reference waveform by converting the first reference waveform and generates the template by synthesizing the first reference waveform and the second reference waveform.

8. A radio communication system for performing communication by transmitting and receiving pulse signals, including a transmitter and a receiver, wherein:

said transmitter transmits a second signal after transmission of a predetermined first signal used for judging a propagation path condition between said transmitter and said receiver;

said receiver includes a template generation portion for generating a template; and

a correlation device for calculating correlation between the template generated and the second signal received after the first signal, and performing detection.

9. A radio communication system as defined in claim 8, wherein said template generation portion acquires a reception waveform of the first signal, detects a plurality of amplitude peaks from the reception waveform acquired, and generates the template on the basis of amplitude values of the amplitude peaks detected or peak timing.

10. A radio communication system as defined in claim 9, wherein said template generation portion generates the template by amplifying and synthesizing

reference templates stored in advance on the basis of the amplitude values detected.

11. A radio communication system as defined in claim 9, wherein said template generation portion generates the template by superposing a plurality of reference templates stored in advance by deviating their positions on a time axis on the basis of the peak timing detected.

12. A radio communication system as defined in claim 8, wherein the first signal and the second signal are transmitted during one communication session.

13. A radio communication system as defined in claim 8, wherein said radio communication system discriminates whether the transmission signal is set to 0 or 1 from deviation of a transmission timing of a pulse signal from a reference time, and said template generation portion acquires a reception waveform of the first signal, and generates the template by synthesizing a waveform obtained by inverting a sign of the reception waveform and delaying the reception waveform by a time corresponding to deviation of the transmission timing and the reception waveform.

14. A radio communication system as defined in claim 7, wherein said template generation portion acquires a reception waveform of the first signal and stores the reception waveform acquired as a first reference waveform, generates a second reference waveform by converting the first reference waveform,

and generates the template by synthesizing said first reference waveform and said second reference waveform.

15. A signal receiving method in a radio signal communication system for performing communication by transmitting and receiving pulse signals, comprising the steps of:

receiving a first signal;

judging a propagation path condition between a transmitter and a receiver by use of the first signal;

generating a template used for correlation calculation with a reception signal in accordance with the propagation path condition judged; and

performing the correlation calculation between the template and the second signal.

16. A signal receiving method as defined in claim 15, wherein said judgment step of said propagation path condition includes a step of detecting a plurality of amplitude peaks from a reception waveform of the first signal and a step of measuring amplitude values or peak timings of said amplitude peaks, and said step of generating the template generates the template by use of the amplitude values or peak timings of the amplitude peaks.

17. A signal receiving method as defined in claim 16, wherein said step of generating the template does not use the amplitude values or peak timings of those amplitude peaks the amplitude values of which are below

a predetermined value.

18. A signal receiving method as defined in claim 15, wherein said judgment step of the propagation path condition includes a step of acquiring the reception waveform of the first signal, and said step of generating the template generates the template by superposing a waveform obtained by inverting a sign of the reception waveform of the first signal and deviating its position on a time axis and the reception waveform of the first signal.

19. A signal receiving method as defined in claim 15, wherein the first signal and the second signal are contained in the same packet.

20. A signal receiving method as defined in claim 15, wherein said judgment step of said propagation path condition includes a step of storing the reception waveform of the first signal and generating a first reference waveform and a step of generating a second reference waveform by changing the first reference waveform, and said step of generating the template generates the template by synthesizing said first reference waveform and said second reference waveform.